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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interest of Lake Carriers, and im rove the character of the service rendered to the public.

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THE U. S. LIGHT-HOUSE SERVICE.

According to the annual report of the Light-House Board to the secretary of the treasury for the fiscal year ended June 30, 1894, there were under control of the light-house establishment, 993 light-ships, 92 bell, 66 whistling, 9 gas and 7 electric buoys. Other buoys in position including pile buoys aggregate 4,434. There are also 187 fog signals operated by clock work and 125 by steam or hot air. On the Western and other rivers there are 1,777 post lights exhibited.

The Light-House Board divides the entire coast line into sixteen separate districts, and the total lighted aids shown on the Atlantic, Pacific, Lake coasts and Western rivers respectively are as follows 851, 145, 379, 1,405, making a total for the entire coast line of 2,780 lighted aids. The unlighted aids reckoned respectively as above shows 5,221, 637, 836, 1,405, or a total for all coasts of 8,099. Fog signals, the various classes of buoys and day beacons come under the head of unlighted aids to navigation.

In the construction, care and maintenance of these national aids to navigation there were employed 32 steam, and 2 sailing tenders and 6 steam launches, 1,190 light-keepers with 880 assistants including the crew of light-ships and tenders, also a total of 1,352 laborers in charge of Western river and other post-lights.

The appropriations made at the second session of the Fifty-third Congress for light-house purposes reached the total of $2,554,500. The rate at which this grand work of aiding commerce is increasing may be gathered from the statement that the last congress was asked to appropriate a round half-million of dollars for the establishment of 41 new aids, all of which are absolutely necessary for the safe conduct of our commerce and especially is this feature more marked when it is stated that the major portion of these aids where asked for points hitherto neglected on the lakes, or rather, perhaps brought into requisition through the enhanced and vast increase in lake commerce during the past few years.

NICARAGUA CANAL SURVEY.

President Cleveland has appointed Mr. Alfred Noble of Chicago, a member of the American Society of Civil Engineers, as one of the three commissioners to examine the proposed route of the Nicaragua Canal, and report to Congress as to its feasibility. The other two members of the commission are Maj William Ludlow, Corps of Engineers U. S. A., representing the engineering corps of the army, and Commander H. T. Endicott, U. S. N., representing the navy. Mr. Noble is a graduate of the University of Michigan, was for twelve years assistant U. S. engineer at Sault Ste. Marie, and was recently connected with the construction of a bridge acoss the Mississippi River at Memphis. This commission was authorized by congress during its last session, and the sum of $25,000 was appropriated for expenses. By the terms of the act, the commissioners are required to make a full report of their findings by the first of November next, and to comply with this requirement they will have to enter upon their work at once.

CONTRACT FOR THREE TORPEDO BOATS.

The secretary of the navy has awarded to the Columbian Iron Works, Baltimore, a contract for the construction of three torpedo boats. This firm was the lowest bidder at $97,000 for each of the boats, and they will be built on the design drawn by the navy department. The competition for this work was keen and brought out bids from all parts of the country, and a strong effort was made to secure a distribution of the contracts and the acceptance of original designs furnished by some of the bidders. This last proposition was referred to a special board, which reported, however, in favor of the department designs, but favored distribution so as to secure a faster and more expensive boat, proposed by the Union Iron Works, of San Francisco, which last suggestion was not accepted by the secretary. The department has been watching closely the performances of some of the new English torpedo boats, which have attained a speed of twenty-eight and twenty-nine knots per hour and having disposed of the contracts for the three boats above referred to, Secretary Herbert has taken up the subject of designs for the other boats authorized by the last naval appropriation bill. He has given instructions that these boats shall be larger than the above, which are to be of 138 tons displacement and twenty-four and one-half knots speed. The boats for which bids will be asked later on will be of about 180 tons. This is forty tons smaller than the English Havoc class, the fastest type afloat, yet they will be required to show a speed of twenty-eight knots an hour. In view of the favorable terms secured for the three boats just awarded to the Columbia Iron Works, it is believed that the later contracts can be placed within the appropriation.

THE 21-FOOT CHANNEL.

With the single exception of the eighth, all sections of the 21-foot channel will be completed before the close of navigation this year. This eighth section comprises the dredging at the foot of the Detroit River. The contractors, L. P. & J. A. Smith, of Cleveland, are known to the government engineers as excellent business men, and the cause of their delay has been the bad weather that has accompanied them almost from the beginning of their work. If this contract is not completed next season at the time specified, they will be given all due allowance for the natural obstacles that have hindered them, which could not have been foreseen when the contract was signed.

Gen. Poe's estimate of the probable cost of the deep channel in his report to the chief of engineers was $3,400,000, but the General has found that $1,500,000 of this amount will not have to be used. His estimate was based on the results of soundings and surveys. The soundings failed to disclose the numberless inequalities in the lake and river bottoms, hence the difference in the estimate and actual cost. The dredging at St. Clair Flats cost $10,000 more than was expected after the start had been made, and still the number of yards excavated was 200,000 less than named in the estimates. In Lake George the dredging necessary overran the estimate. As a certain amount of the total appropriation is set aside by congress for the needs of the coming year, the million and a half has not been appropriated, and need not be now.

STRENGTH OF WOOD.

As a result of nearly 40,000 tests of timber made at the laboratory of the Washington University at St. Louis, under the direction of the forestry division of the Department of Agriculture, the following facts have been determined: Seasoned timber is about twice as strong as green timber, but well-seasoned timber loses its strength with the absorption of moisture; timbers of large sections have equal strength per square inch with small ones when they are equally free from blemish; knots are as great a source of weakness in a column as in a beam; long leafed pine is stronger than the average oak, and bleeding timber does not impair its qualities.

NEWS AROUND THE LAKES.

CLEVELAND, O.

Special Correspondence to The Marine Record.

Capt. Ira B. Mansfield is now in the laundry business at Chicago.

The Cleveland and Buffalo Line opened the season by starting out the State of Ohio on Wednesday night.

The Chase Machine Co, will furnish an automatic fog whistle machine to the new steamer Chili building for M. M. Drake et al at the yards of the Cleveland Ship Building Co.

Mr. W. S. Babcock, manager of the Chicago Ship Building Co., Mr. Edward Gaskin, manager of the Union Dry Dock Co., Buffalo, and Capt. Wolvin of Duluth, were among the visitors at this port on Wednesday.

Capt. John B. Hall, late manager of the fleet of whalebacks at this end of the route, has entered into partnership with A. Clark & Co., of Buffalo, vessel brokers and insurance agents. Capt. Hall has a host of friends, and whether here or in Buffalo, his commercial success is assured.

With the placing of large blocks of iron ore two weeks ago, the freight market lapsed, and now it is a case of hanging on awaiting events and the opening of navigation. It is certain, however, that a good deal of coal has also been contracted for but the takers are not free to admit how much.

At the yards of the Globe Iron Works Co. building is somewhat delayed on account of steel not being shipped promptly from Pittsburg. The fleet of steel canal boats and the large schooner for Irwin and others, with the finishing work on the North Land and considerable ship repair work, keeps a large body of men busy.

Capt. E. T. Rattray will sail the Joliet this season, Capt. William McGarvey the Continental and Capt. Charles Hinsley the Specular. This change has been brought about through Capt. Millen resigning command of the Joliet to take the Centurion, her late master, Capt. Wesley Brown, having been appointed to the command of the North West.

Mr. C. B. Calder, Superintendent of the Detroit Dry Dock Engine Works and formerly shore engineer of the Menominee and Mutual Steamship lines of this city, visited this port on Tuesday and was met by a number of his marine friends. Mr. Calder, who is more than usually well liked seems to have improved in the Detroit air. Perhaps it is not so smoky as Cleveland?

Commodore Luther Allen, of the yacht club, ably assisted by Mr. Worthington, deserves the highest praise for the splendid work which they have done during the past few weeks. From a paltry sum in the yacht club treasury, these gentlemen now find upwards of ten thousand dollars in sight and more to follow. The foundation for the club house has been made and the contract for erecting a sightly structure on the lake front is about being awarded. Evidently the Commodore believes that the way to do a thing is to do it, and goodness knows the building of a yacht club house hung fire for many moons before he took hold of it. The Cleveland Yacht Club will now have a domicile, and the credit for securing same is due in a great measure to Commodore Allen.

This port is never behind in launches and any one desiring to see the virgin plunge of two, three or four thousand tons of metal fashioned into the form of a ship may observe the feat almost every week. On Saturday, April 20, at 3 p. m. (sun time) the large steamer Chili will be launched from the yards of the Cleveland Ship Building Co. Her general dimensions are 338 feet over all, 324 feet keel, 42 feet beam and 27½ feet molded depth. With high powered triple expansion engines and two large Scotch-type boilers her speed is assured. She is also equipped with a windlass and steam capstans from the American Ship Windlass Co., Providence, R. I., so that her ground tackle is well taken care of. Relative to steering, it is well known that nothing for large tonnage lies over the Wiliiamson steam steerers and she has this equipment also, Dunn's stockless anchors, though I much dislike the hawsepipes which they call for as unsightly. The new ship is equipped with the finest arrangements for handling package freight, having four large ports on each side and the general fittings are above criticism, the cabins are finished in hard wood and look elegant. She will have two pole spars and be given a rating in Bureau Veritas of the highest class, as she is strictly entitled to. The Chase automatic fog whistle machine will be fitted on the Chili. The launch under Superintendent Bristow is an assured success and no departure will be made from the above time.

CHICAGO, ILL.

Special Correspondence to The Marine Record.

Capt. John Stone of Bay City, has arrived to fit out the steamer Boyce.

The steamer Thomas Cranage left here Monday morning for South Chicago to load grain for Buffalo.

The tug Tom Brown of the Chicago Towing Co., received about $300 damage by fire early Monday morning.

There was a large fleet of lumber laden steamers and schooners on the lumber market on Monday and Tuesday.

The steamer W. H. Wolf arrived from Milwaukee light early Monday morning and loaded 78,083 bushels of wheat at the Illinois Central Elevator.

The Goodrich Co.'s steamer Atlanta, Capt. Wm. Nicholson, arrived Monday morning from Milwaukee on her first trip this season. She left Monday night for Grand Haven.

C. E. Benham of Cleveland was in Chicago Tuesday. He sold the passenger steamers Superior and Duluth for the Duluth and Superir S. S. Co. to the Euclid Beach Park Co., Cleveland.

The Chicago Lodge of the Shipmasters Association have removed to their quarters from 2 Market Street to the hall over the Le Grand Hotel, northwest corner of Fifth Ave and Kinzie St.

Palmer, Cook & Calbick will remove from the Royal Insurance Building to 6 Sherman Street on the ground floor on May 1st. Palmer & Co., Cleveland, and Palmer, Cook & Calbick, Chicago, have amalgated their two offices under one head, with firm names as above.

Whiting, Ind., is to be made the terminus for the new Standard oil tank barges which are building at West Superior. The barges will be loaded at an anchorage 400 feet from shore. The oil will be stored in huge tanks now building at Superior, and will be distributed throughout the Northwest in tank cars.

Owing to the peculiar conditions in the wheat market, the steamer Charles A. Eddy and several other boats had their stored grain taken out of them, the grain being worth more in the elevators than for shipment. The elevation of this grain started trivial stories which caused the market to break one cent per bushel until the mirth was learned.

Up to Tuesday April 16th, 103 steam and sail vessels have been loaded with grain since the close of navigation last year. Their cargoes comprise a total of 7,298,000 bushels of wheat, corn and oats. Sixty-five of the winter grain fleet are yet without cargoes and there is no inducement for them to load as but one cent per bushel is all that is offered.

The tug J. H. Hackley of the Dunham Line brought into this port on Monday a large piece of the bulwarks of the lost steamer Chicora, which Capt. Smith had picked up in the Lake off Evanston and it had the monogram G & M painted upon it. The Graham and Morton side-wheel steamer City of Chicago, Captain Charles McIntosh arrived here Tuesday morning from St. Joseph and Benton Harbor on her first trip this season. She had 87 passengers and a large quantity of freight on board.

The steamer Hattie B. Perene is dry docked for a new shoe. The schooner Ford River for recalking but s and four seams below high water mark. The steamer Fayette for some calking, a new rudder and some new stringers and rail. The schooner Grand Rapids is in for a general overhauling. The tug Rosaline for repairs to stern bearing. The steamer Buffalo was in dock and her stern-post straightened. The steamer Glenn for repairs to stern bearing and some calking. The steamer Conemaugh for a new rudder stock and some calking. The steamer S. K. Martin for a new wheel. The steamer Robt. L. Fryer for 155 feet of new keel, considerable new bottom plank, part new stern and re-calking. The steamer H. L. Worthington for steel plates on keelsons and recalking. The schooner Wm. Jones had her centre board box plugged and some calking. The schooners Winnie Wing and Apprentice Boy had their bottoms recalked. The steamer Lawrence received a new wheel and some calking.

DETROIT, MICH.

Special Correspondence to The Marine Record.

The steamer Frank E. Kirby opened navigation between Detroit, the Islands and Sandusky Monday.

The steamer A. Folsom and schooners Mary Mitchell and Reuben Doud will take wheat to Buffalo on private terms.

The wooden steamer building at the Orleans street yard for C. R. Jones and others, of Cleveland, will be launched Saturday. Her name will be the Argo.

Eddy Bros. & Shaw may, some time during the season. place an order for a duplicate of the steel steamer now building for them at F. W. Wheeler & Co.'s West Bay City shipyard.

Boiler No. 2 has been hoisted into the steamer Unique at Oades' dock, and will soon be in shape for use. She will then receive a new cabin and upper deck, and will probably be ready for work on her route by May 1.

The Escanaba and Lake Michigan Transportation Co. will try to sell its steamers, the Escanaba, Argonaut and Rhoda Emily before navigation opens. Congressman Whiting, of St. Clair, is president and general manager.

The new Wehrle passenger side-wheeler Arrow is nearing completion at the upper yard of the Detroit Dry Dock Co. A notable feature of this fine little steamer is her clean sharp lines. She sits in the water lightly and gracefully. She will have the old engine of the City of Sandusky, but she will be fitted with new boiler and the Howden hot blast, and her builders think she will have no trouble proving herself a fast passenger steamer.

SUPERIOR AND DULUTH.

On Tuesday, April 9, a son was born to Mr. and Mrs. Sauget in the Wisconsin Point light-house.

Steady off-shore winds have once again cleared the harbor of ice. Small shore liners are in commission.

The new Minnesota vessel tax law promises, from correspondence, to attract considerable tonnage to this port.

The steamer Jay Gould, which struck a rock at Detroit last fall, will go to Chicago for repairs as soon as the ice will permit.

The Consolidated Elevator Co. has been incorporated with a capital stock of $2,000,000, and the incorporators are the purchasers of the Lake Superior elevators—F. B. Kellogg, C. A. Severance, E. W. Peet, of St. Paul; T. B. Casey, of Minneapolis, and George Spencer, of Duluth.

Superior is to have a grain registry office in the near future, and each city will thereafter keep track of its own grain. Under the new arrangement daily and weekly reports of the receipts and shipments of the various elevators will be posted on the Superior board of trade.

A crew of men is at work overhauling the chutes of the Duluth and Winnepeg ore docks at Allouez Bay. The work is well under way, and it is expected that within a week's time the dock will be in readiness to receive consignments of ore, which will be on hand in less than two weeks.

Manager Farhart, of the Duluth & Ogdensburg Transit Co., reports success in organizing a line of steamers between Montreal and Duluth, to be known as the Duluth & Montreal Transportation Co. The boats will call at Port Arthur, and Duncan & Woodhouse, of Montreal, will be the managers. Three Canadian boats, whose names Mr. Farhart declines to give, have been chartered.

A plan is on foot to carry soft iron ores from the western end of the Mesabi range by boat to St. Louis, Mo., to be smelted with the harder ores of that section. A system of locks will have to be built on the Mississippi to allow of the traffic. The little city of Grand Rapids on the western end of the range is the prime mover in the plan, and other towns in the vicinity are now backing it. The secretary of war is said to be in favor of the proposition.

The work of construction on the Standard Oil Co.'s tank barges is being pushed vigorously at the whaleback shipyard. A beautifully finished model of the oil boats has been forwarded to the Standard Oil Co. at New York. The contract for the rigging and sails were let to a shipchandlery firm in Chicago. Each vessel will carry between 5,000 and 6,000 square feet of canvas. They will tow behind steamers engaged in trade between Chicago and the head of the lakes.

The Omaha Railway has received bids from Capt. C.

S. Barker and Williams, Upham & Dougherty for deepening three channels near its new proposed merchandise dock at Allouez Bay. Last year a fine wide channel 30 feet deep was completed from the natural entry to the new Northwestern Coal Railway Co.'s docks, which is a block west of the new Omaha dock. The work to be done by the Omaha company will consist of two channels from 500 to 700 feet long on each side of its dock, also a channel from the point where the Northwestern Coal Co.'s passage ends to its own dock. The latter channel will be exceptionally deep and wide enough so that two or more boats can pass.

The whaleback steamer John B. Trevor, was launched on Wednesday afternoon by the American Steel Barge Co., at West Superior. The Trevor is 320 feet long, 38 feet beam and 24 feet depth of hold. She has several improvements in equipment not in other whalebacks, including electric lighting and steam steering, a ballast tank amidship, with a capacity of 100 tons of water, and a Providence steam capstan and windlass in the forward turret furnished by the American Ship Windlass Co. The new steamer has a capacity of 100,000 bushels of grain on a very light draft, and a speed of 14 miles an hour. The two tank barges for the Standard Oil Co., will be launched next Wednesday according to present plans.

BUFFALO, N. Y.

Special Correspondence to The Marine Record.

The tug Wisconsin and steam barge St. Louis have had a thorough overhauling at the Union dry dock.

Maytham's tug line has disposed of the Ash and Ingram to Capt. C. D. Thompson, of Port Huron, on private terms.

The Hopkins Steamship Co., of Detroit, has decided not to run the Centurion in connection with the Anchor line this season.

Interstate Commerce Commissioner C. C. McCain has consented to take charge of the lake-and-rail pool. His office will be located here.

Cleveland will begin navigation for the Northern Steamship Co. The Northern King, in winter quarters there, has orders to start next Sunday. The Wind will leave this port a few days later.

Heavy drainage of water from farm lands between Buffalo and Pendleton, N. Y., has so delayed repairs on that division of the Erie Canal that the section will hardly be ready for opening May 1, as announced.

The steamer North West is taking on her fit-out at the foot of Main street. When everything is loaded she will go into the outer harbor to receive a new coat of white paint while the interior is being put in shape.

The proposition to use the sea wall at Buffalo for dockage for excursion purposes is meeting with strenuous opposition from all sides. It is claimed it would take over $4,000,000 to build docks and put the sea wall in shape for an excursion boat landing.

The Lehigh line will begin the season with its steel boats only, leaving the wooden ones in ordinary until business or hot weather brings them into commission. The captains of the wooden boats will serve as mates on the steel steamers until the full fleet is placed in service.

The steamer State of Ohio will receive a hearty welcome on her arrival from Cleveland Thursday morning. Buffalo has been locked in ice so long that any harbinger of spring will be greeted with enthusiasm. The tug Cascade got out through the ice Tuesday, but like Noah's dove, "returned no more" to her starting point.

A Galveston, Tex., dispatch states that the steam-yacht Bessie Ross, formerly the Augusta, built by the Herreshoffs in 1887, and recently sold by the state of Texas to George B. Hayes, of Buffalo, will come to this port via the Mississippi. She is about 90 feet long over all, by 11 feet beam and 7½ feet depth. If she takes the route proposed, some portage will surely be necessary.

There is a great interest in Buffalo just now over the suit of the Lackawanna Railroad *vs.* the Crystal Beach Steamboat Co., in connection with the temporary injunction obtained by the former to back up its right to monopolize the dock front from Washington street to the Commercial street slip. A decision in the case of the city against the Lackawanna, to establish the title to Front street, will be handed down in about ten days.

Buffalo hard coal shippers are not uneasy at the agreement of vessel owners not to buy fuel from them this season. They think the agreement will fall to pieces when the first rush for coal cargoes comes. There are 68 names signed to the paper, with a total tonnage of 254,703, but it is said that one or two far-sighted vessel men, who did not like to refuse, have merely enrolled such boats of their fleets as are not likely to come near Buffalo all season.

MILWAUKEE, WIS.

Special Correspondence to The Marine Record.

The schooner W. H. Chapman is on the boxes at the south yard, undergoing calking, preparatory to taking a cargo of grain across the lake.

The steamer Thomas Davidson has been in the dry-dock receiving repairs to her rudder and shoe, which were damaged in Ashtabula Harbor last fall.

A Syracuse, N. Y., man has secured the contract to build the Petoskey breakwater. It will be 500 feet long, beginning in eight feet of water on the south-west coast and extending to the north-east.

The schooners Noque Bay and Mantanee, which have hitherto traded almost exclusively on Lake Michigan, are being fitted with steam pumps and winches at Menominee, and will carry lumber from Ashland to Tonawanda.

The Goodrich Line steamer Atlanta filled at Manitowoc on Saturday night and sunk. The accident was caused by an open sea-cock. A steam pump was put on board the next day and this was able to lower the water until the steamer floated. No damage resulted.

Contractor Robert Love has bought the pile-driver Dolly Varden, which he has run for 16 years, from the Muskegon Booming Co. It strikes 75 blows a minute and originally cost $11,000. He will fix the machine so as to be self-propelling and removable from place to place without the use of tugs.

Judge Seaman in the United States Circuit Court on Wednesday, awarded $3,600 in the salvage suit of the owners of the steamer City of Venice, the McGraw Transportation Co., against the owners of the steamer Spokane. The suit is an important one as it fixes more closely than heretofore the differences between salvage on the lakes and salvage on the ocean. The transportation company asked for $15,000. The commerce of the lakes was vastly different from that of the open sea, the decision said, in that on the lakes it followed regular and well-defined courses, often within sight of shore, and in case of distress, vessels were not liable to remain long out of sight of other vessels.

SAULT STE MARIE.

Special Correspondence to The Marine Record.

The Western Union telegraph office here will be open all night during the season of navigation, and will have an all night delivery force.

The tug F. W. Gillette has been released from the beach at Marquette, where she went on last fall. Her injuries are said to be very slight.

The management of the Canadian Pacific steamers will run through the American lock as heretofore, so they will not have to pay import duty to the Dominion government on their fuel.

The Northern line steamers will not use the Canadian lock this season. It is said that the lower portion of the sides of the narrow Canadian locks are so constructed that there is danger of twin-screw boats injuring their wheels.

Arrangements have been completed whereby a side-track will be laid by the Canadian Pacific on the right side of the canal on the property of the Chandler & Dunbar Water Company. Work of laying the track to Dunbar & Sullivan's shipyard will be commenced soon. A new track will also probably be put in for the use of the new hatchery when it is completed.

Dunbar & Sullivan have already resumed dredging operations at the upper entrance of the canal. The Faugh-a-Ballagh has been at work for a week, and the Tipperary Boy will start as soon as her machinery is in shape. The steel dredge Brian Boru, which is being rebuilt at Dunbar & Sullivan's ship yard, will be completed some time in May. The Wild Irishman, which was sunk in the canal last fall, will be raised as soon as the ice breaks up, but will probably not be worked this season. Over 100 men are now employed by this firm, and a mammoth new scow is being built.

LUDINGTON, MICH.

Special Correspondence to The Marine Record.

The schooners Mars Capt. William Young, and Geo. L. Wren are fitted out ready for their next season's work.

The small scows Tinne and Laura and schooner Caledonia were the first vessels to load and leave port this season.

The steam barges Colin Campbell and W. J. Carter were the first to arrive and load lumber at this port this season.

The schooner Austin which went ashore off this port last November, is lying in the slip at Butters & Peters' mill. She is sunk and is full of water.

Dunnaker & Melindey's and Cartier's and Butters & Peters' lumber saw mills have commenced running. The Lyons and the Pere Marquette Lumber Co.'s mills are ready to start, but probably will not commence until May 1st.

Your correspondent paid a visit to the life-saving station at this port last week and found Capt. Charles Tufts and his hardy crew, comprising John Nelson, J. F. Pratton, Van Ludwig, Peter Carlson, Oscar Wilkinson, Berndt Carlson and Joseph Mitchell, and the lifeboats and life-saving appliances all in excellent condition. The life-boat is an eight-oared boat and therefore cannot be fully manned with a crew of seven men, and in fact requires a crew of ten men, as one must steer and there should be one man forward to throw or receive a line to or from a vessel in dtstress. The surf boat is neither self-bailing nor self-rightlng, and would, if filled by heavy seas, become useless for rescuing lives, and would place the lives of her crew in peril in case of capsizing.

TOLEDO, OHIO.

Special Correspondence to The Marine Record.

Quayle's new elevator and warehouse will be completed about May 1.

Capt. Carey, who was last season master of the tug Robert Downing, is now in charge of the government tug Spear.

.The schooner Rosa Sonsmith is receiving general repairs here.

The tug C. G. Ashley has been thoroughly overhauled, and looks like new.

Breyman & Bro's. dredge No. 2, is at work deepening the water at the Lake Shore deck. The tug Goldsmith is attending her.

The government steamer Swansea is about ready for business. Capt. C. A. Stevenson will have charge of her, with John Marshall as engineer and H. McNutt as steward. Assistant Engineer W. T. Blunt will be here from Cleveland this week, and will have all plans ready for the government work. The tug Spear and the dredging outfit are in dry dock at Detroit, receiving some minor repairs, but will soon go to work cutting away the shoal places.

GREEN BAY, WIS.

Special Correspondence to The Marine Record.

All the lights on Green Bay have been re-lighted for the season of 1895.

Should a heavy southerly or westerly wind set in it is feared that the exposed piers on the east shore of the bay will get a bad squeeze from the moving ice. On Thursday, April, 1865, the ice in this bay went out in a body. The day before it was almost as solid and thick as in the month of February, but a gale from the southward cleared it of every particle.

Hon. E. S. Minor, on Monday, sold the tug Jesse Spalding to Capt. B. B. Inman, of Duluth, Minn. Consideration private. The Spalding was built at Green Bay in 1883, and soon after became the property of Mr. Minor, who paid $10,000 for the craft. She is 52 tons gross and 25 net; is 71 feet long, 10 feet beam and 8 feet hold, and has been regarded as one of the best boats in the Green Bay region.

The coming report of the goverment engineers regarding the amount of traffic passing through Sturgeon Bay Canal will be something astonishing. For the season of 1893 it was upwards of $11,000,000 in value and for 1894 it was no doubt half as much again, or $20,000,000.

Work on the new aids to navigation in the vicinity of Death's Door will commence as soon as navigation is fairly open and the water settled.

COAL HANDLING MACHINE.

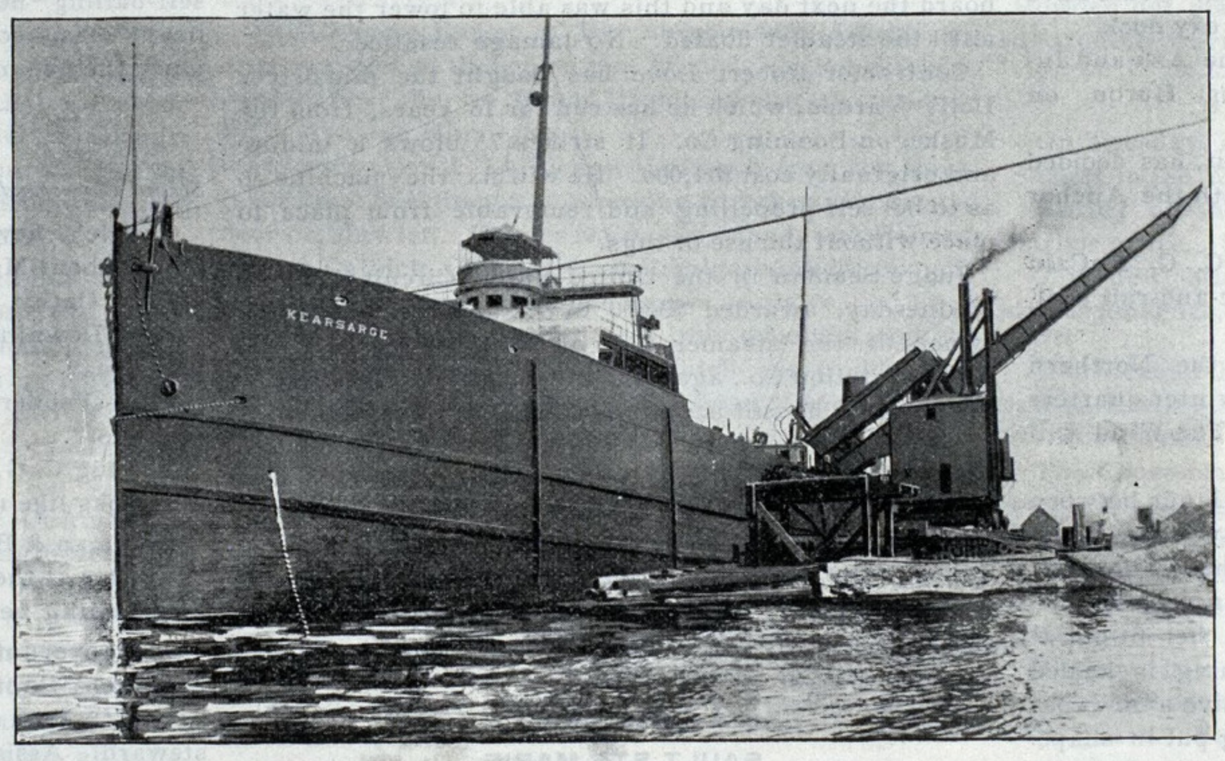
(ILLUSTRATED.)

Pickands, Mather & Co., of Cleveland, O., the well known dealers in Iron ore and Coal, as well as owners of one of the finest fleet of modern steel steamers on the Lakes, are also owners of one of the greatest time and labor-saving machines that has been invented during the present century. It is described in the 1895 edition of Beeson's Inland Marine Directory now just from press, as follows:

The machine is a portable revolving derrick with a bridge upon which a loaded car can be drawn and then lifted bodily and the coal poured into the vessel. There is no trestlework about it, and it is not expensive in construction. It is a bridge of two plate girders turning on trunnions at the end nearest the river. These trunnions are carried on the framework of a house, which in turn is carried on 100 twelve inch wheels arranged in a circle after the manner of a drawbridge. These wheels work on a heavy platform which is mounted on sixteen large car wheels. By this means the entire outfit can be moved along the dock from one hatch of the vessel to another. Six railroad tracks run perpendicularly to the dock, and on these stand the cars which it is desired to unload into the vessel. The machine is worked by hydraulic power, which is controlled by two engines. The hydraulic ram is eighteen and three quarters inches in diameter. This lifts the bridge. The bridge is longer on the side toward the shore and on this the cars are drawn up. The hydraulic ram then tips up the bridge and, the end-board of the car being removed, the coal runs out into the hold of the vessel. An ingenious chute, or trough, receives it and makes it possible to distribute the coal more evenly over the bottom of the vessel than could be done by the old process. The machine, therefore, both increases the speed of loading and lessons the expense of trimming the ship. When the load had been discharged from the car the bridge tips back and the car runs down on a track which has been set aside for empties. The vessel does not have to be shifted while being loaded, as was formerly the case. The machine is shifted instead.

One of the most valuable features of this new and unique machine is that it is designed to handle the ordinary coal car without any change. The only alteration that is necessary is to have the end boards of the cars fitted so they can be readily withdrawn. This of course is a small expense. The two railroads running from the coal regions into Ashtabula already have equipped 2,000 cars in this manner and more are to follow. By it an entire carload is dumped into the hold of the vessel at once without injury, it is claimed, to the coal. It already has made a record of fifteen cars an hour, or 345 tons, and a 3,000 ton steamer can be loaded in from eight to twelve hours. This is a clear saving of from one day and a half to three days in securing a cargo, and means a great difference in the earning capacity of every boat in the coal trade.

The machine is certain to practically work a revolution in the lake coal trade. It means a large saving in the cost of loading and is popular with both the vessel owners and the coal companies. It only requires four men to operate the whole machine. These are the engineer, who handles the whole plant; a fireman, a man on the bridge, and a man to attach the cables to the cars so they can be drawn up on the bridge. These four men can do by the use of this machine in eight hours what it has taken twice or three times as many men heretofore to do in three days.



LOADING 345 TONS OF COAL PER HOUR.

LIFE-SAVING SERVICE REGULATIONS.

The General Superintendent of the Life-Saving Service, with the approval of the Secretary of the Treasury, has issued amended regulations relative to the uniforms of surfmen. The amendments consist of the substitution of a dark blue kersey or flannel coat, very similar to a Norfolk jacket, in place of the Guernsey or Cardigan jacket now worn, and the introduction of a winter service cap so arranged that in extremely cold weather it can be adjusted to protect the ears. During the past severe winter the ears of many of the surfmen have been frozen, some on patrol duty and many more while engaged in rescuing the shipwrecked. The option of wearing this cap is therefore given the surfmen. It is represented that these changes will be generally acceptable to the crews.

The amended regulations take effect upon the Atlantic and Gulf coasts at the commencement of the next active season, August 1; on the Pacific coast July 1; and on the lake coasts as soon after the commencement of the active season of 1895, as the articles can be obtained.

Keepers are directed to see that the men are always provided with the proper uniform, and will be careful to inform them before enlistment that they must procure their uniforms at their own expense. The overcoat and winter service cap need not be purchased unless desired; but if either is worn it must be the one prescribed. If the men already have suitable oil clothing it may be altered and marked to conform to the regulations.

The assistant inspectors in the several districts, or in their absence the district superintendents will give the crews all the assistance they are able in procuring their uniforms.

All employees are expected to present a neat and proper appearance. Keepers will enforce discipline in this respect, giving such orders as to insure that the men are dressed alike when on duty. Any dereliction must be promptly reported to the Assistant Inspector, or, if there be none, to the District Superintendent.

With the approval of the Assistant Inspector, or, in his absence, of the District Superintendent, as to the quality and pattern of any of the articles herein permitted or required to be worn, a keeper or a surfman may purchase or obtain the same upon his own account without restriction as to price, place of purchase, or terms of payment.

A NEW EXCURSION LINE.

The Euclid Beach Park Co. purchased this week the two ferry steamers Duluth and Superior, for service between Cleveland and Euclid Beach, a new summer resort on the lake front east of that port.

The Duluth and Superior were built by the Cleveland Dry Dock Co., and were launched in the spring of 1891. They were at once taken to the head of the lakes and placed in the ferry trade between the two cities for which they were named. Their trade was destroyed after two seasons by the construction of a bridge connecting these cities and they were then sold and placed in the Chicago World's Fair passenger business. They lay idle during 1894. The present purchase price is said to be about $20,000 each.

The general dimensions of the steamers are 100 feet long, 30 feet beam and 10 feet depth. They are fitted with compound engines, with cylinders 20 and 38 inches by 28 inches stroke. The boats have an average speed of 14 miles an hour. Their capacity is about a thousand passengers. On the change of their port of hail they will doubtless be given new names if the treasury department will permit. The steamers will leave Chicago for Cleveland as soon as the ice permits, and will be given such changes and repairs as are necessary before they are placed in commission.

INLAND LLOYDS REGISTER.

The Inland Lloyds Register for 1895, was put in general circulation this week. The committee of valuation appointed by the underwriters were ten days in session in Cleveland, modifying the value of floating property so that it would more likely conform to the state of the times. No discrimination, however, was made between boats, each one being taken separately and valued. The cut all told on wooden boats is about 10 per cent., and from 10 to 20 per cent. on steel boats. A few instances where there is a little more can be found. The passenger whaleback steamer Christopher Columbus is cut from $300,000 to $225,000, and the steamer Virginia built by the Globe Iron Works Co. in 1891, was cut $50,000 in value, the Menominee steamers are all cut $25,000 in value, the steamers Washburn and Pillsbury are cut $30,000 each in value and the Hawgood & Avery steamer S. S. Curry is cut $40,000. Deductions for wooden tonnage average between $5,000 and $10,000 each.

This year a most thorough and particular inspection for classification has been made at every port. Inspectors have been at work since December last, and upwards of 2,500 surveys were made. Manager McLeod has been rigid in the requirements and the result is that some owners are hustling to complete repairs before navigation gets fully started so that they may procure the necessary rating for insurance purposes.

A new departure this year in the register is in tugs. In 1894, the tugs were entirely left out with the exception of a few large river tugs, but on discussion last winter the underwriters decided to admit them again to the books, and all tugs from 20 tons up are in the books.

Policies this year will be for wooden steamers of the first-class a full collision fire and casualty the same as steel craft at 3½ per cent., or from 1 to 1½ lower than previously, for the same thing. A full policy on steel steamers will be put in at 2½ and 2¾ cents a rate, somewhat lower than a year ago. Policies will not be so readily wrote on A2 tonnage as heretofore. However, there are a great many staunch and well-kept-up A2 craft, which have only been put in this class on account of limitation.

The insurance men recognizing the efforts of owners to keep up their vessels will, no doubt, readily accept risks on these. Quite a few vessels on the second letter this year were classed A1 within a year or two past, and the new Register bears evidence of close good work as regards discreet ratings.

NEW YORK MARITIME EXCHANGE.

At the last meeting of the Board of Directors of the Maritime Association, New York, President Atwood in the chair, the following resolution was adopted:

RESOLVED, That in our opinion Gleason's Assembly bill, No. 1432, requiring licensed engineers to operate launches propelled by naphtha, oil or electricity, is unwise legislation. That type of pleasure craft is largely owned by individuals of moderate income for use on interior waters and operated by the owner in perfect safety. In our judgment such a law would be unnecessary, burdensome and to a considerable extent prohibitory.

Upon the Rule of the Road at Sea the committee reported steps taken to secure a joint recommendation to the Secretary of the Treasury from commercial representatives as to the line he is required to fix marking the division between the high seas where international rules of navigation apply, and harbor waters, where local rules are applicable.

LAKE GRAIN INSURANCE.

The warfare between the Chicago board of marine underwriters and the British and foreign and allied companies in grain insurance, may result disastrously to schooners, barges and the older wooden steamers. It is now proposed to make a uniform board rate of 25 cents per $100 on all line steamers, regardless of class or value, with 15 per cent commission to local agents. Grain on steamers not belonging to the lines may be asked a much higher rate. Heretofore the Chicago board has charged the same rates on all classes of boats rating A2 or better, whether steam, sail or tow. The new classification, if adopted, will be a heavy handicap to schooners and steamers under A1, for they will be compelled to pay back to the shipper any excess in insurance rates on account of their lower rating. The schedule made up by the British & Foreign gives a season contract rate from April 1 to December 5, of 15 cents on all regular liners of any value and class, and on all A1 steamers, not the regular lines, valued at $100,000 and over. On all non-line steamers of A1 and A1½ class, valued at $50,000 and under $100,000, the season rate is 25 cents. On all A1 steamers of less than $50,000 value, all A2 steamers of any value, and all tow barges, the Buffalo rate from April 1 to September 30 is 40 cents; in October, 75 cents, and from November to the close, $1.

In the way of waiving averages the schedule is even more severe on the lower class boats. While as yet no Chicago shipper has closed contracts with the foreign companies still their schedule may have an important bearing on the ultimate action of the Chicago board. It is claimed that the foreign companies have already secured the greater part of the grain insurance out of Duluth, Toledo and Detroit for the coming season. Their Lake Superior rates are the same as those from Lake Michigan.

The immediate effect of the new order of things will be to drive the older steamers out of the grain trade entirely, for with grain freights as low as they are now the boats cannot carry the burden of paying extra insurance to secure cargoes. The schooners and tow barges will meet the same fate in a large degree. The action of the underwriters will but hasten the retirement to other lines of trade of a large number of craft, which were being displaced by the building of large steel steamers.

The proposition to establish a sliding scale of grain insurance rates according to size and ratings of boats will meet with the most sturdy opposition in the Chicago Board of Marine Underwriters, and it seems likely that the project will fail. The present rate of insurance on all boats of A2 rating or better is 25 cents per $100. This is really a better average rate than that offered by the British & Foreign and allied companies, which is seeking the business direct from shippers. The entire situation in grain insurance is just now in such a chaotic state that few general or local agents have much idea where it will end, though a few days will determine rates one way or the other.

LIGHTS AT SEA.

The recent disaster to the "Elbe" has brought forward a whole host of proposals, some feasible, many impossible, and a few really practical. Of the latter class electric lights is suggested as one which would safeguard the lives of those who "go down in ships to the great waters." This is a suggestion that large liners should carry, in addition to the duly authorized lights, an elevated electric light at every 50 feet of her length, thus forming a symmetrical line of lights. This would indicate the length of the hull and the direction in which she is steaming while it would also indicate the character of the vessel as an ocean liner. Another advantage is that a line of electric lights may penetrate a passing snow shower which obscures the ordinary lights, thus affording just the few seconds necessary to avoid a collision. The expense of such additional safeguards is infinitesimal compared with the danger wrought by even one collision in a few thousand possible. The originator of this scheme may, in fact we are prone to admit knows very little if anything about ocean navigation, but it is evident that among other things if adopted it would provide more work for electrical engineers.

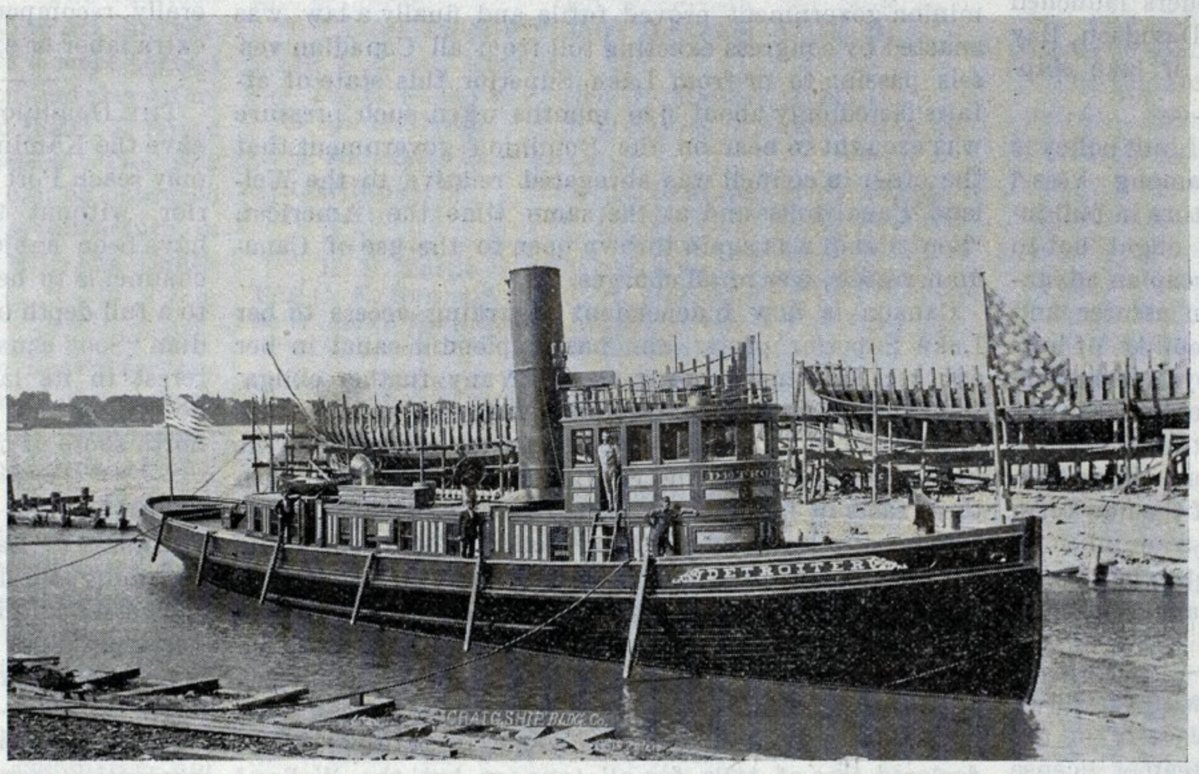
PROTECTION FROM FIRE.

(ILLUSTRATED.)

It is only within the past few years that the attention of municipal officers at lake ports has been directed towards the efficiency of floating fire stations to protect the valuable property lining the river frontage and now each of the larger ports has one or more powerful fire boats always in service and ready to proceed to any point on the river to subdue a fire.

The fine little steamer herewith illustrated was built by the Craig Ship Building Co., of Toledo, for the City of Detroit, and took her station on the river front there last year, since which time she has rendered valuable service. In honor of the port for which she was built and equipped she was named the Detroiter, and our view shows her at the yards of her builders ready for delivery.

In addition to actual water front service a departure has recently been made whereby a fireboat can send a force of water through pipes running well back into the city, and this feature may point out the advisability of having permanent stations provided with quick steaming tubulous boilers at various places in the larger cities, for if the departure is so excellent a one in the case of fireboats, the same argument applies in having water pumped through pipes from a stationary engine house.



DETROIT'S NEW FIRE BOAT.

The Craig Ship Building Co. are to be congratulated on furnishing the "City of the Straits" with a craft which, from current reports, is not too speedy, but has been given so powerful an equipment in pumping machinery as to be able to cope successfully with very large fires.

WISCONSIN'S LATEST TAX LAW.

The substitute bill for the taxation of vessel property, just passed by the Wisconsin General Assembly, provides that all lake craft shall be assessed as follows: Steel steamers, age 1 to 10 years, $15 per net ton; steel steamers, aged 10 years and upwards, $12 per net ton; wood and composite steamers, age 1 to 5 years, $9 per net ton; wood and composite steamers, age 5 to 10 years, $7 per net ton; wood and composite steamers, age 10 to 15 years, $6 per net ton; wood and composite steamers, age 15 years and upwards, $4 per net ton; steel barges, tow barges and sailing crafts, age 1 to 10 years, $12 per net ton; steel barges, tow barges and sailing crafts, age 10 years and upwards, $9 per net ton; wood and composite barges, tow barges and sailing crafts, age 1 to 5 years, $7 per net ton; wood and composite barges, tow barges and sailing crafts, age 5 to 15 years, $5 per net ton; wood and composite barges, tow barges and sailing crafts, age 15 years and upwards, $4 per net ton; steel tugs, age 1 to 5 years, $75 per net ton; steel tugs, age 5 years and upwards, $50 per net ton; wood and composite tugs, age 1 to 5 years, $40 per net ton; wood and composite tugs, age 5 to 10 years, $30 per net ton; wood and composite tugs, age 10 years and upwards, $20 per net ton; all crafts not above described or not registered or enrolled or required by the federal laws to be registered or enrolled shall be valued and assessed in like manner as other personal property.

MAJOR ADAM'S GREAT PLAN.

The custom of the light-house board for years has been to erect a post lantern a certain distance outside of a light-house for range purposes, and access thereto has been by a long platform exposed to the fury of the elements. As the cost of replacing the platforms after being washed away is expensive because of the frequency of the occurrences, Maj. M. B. Adams, Corps of Engineers, U. S. A., engineer of the Ninth and Eleventh Light-House Districts, has hit upon a plan for obviating the difficulty.

Maj. Adams describes the device in an appendix to the last annual report of the light-house board. The plan is to convey the lantern through a continuous inclosed conduit, made of 1-inch boards measuring 1 foot wide by 2 feet, 2 inches high in the clear, so as to allow the ordinary lantern, resting on a small car to pass through. The conduit is supported at the desired elevation of the light on trestles placed at intervals of 16 feet, securely fastened to the pier timbers at their lower ends. The outer end of the conduit terminates in a box provided with three panes of glass on the front and on either side, forming a lantern having a galvanized sheet iron roof and globe ventilator. The car with lantern is conveyed back and forth between the beacon tower or fog signal house, and its position at the outer extremity is maintained by means of an endless cord passing through a sheave or small blocks at the outer end, onehalf of the cord being supported by small rings (fairleaders or friction rollers) attached to one side of the conduit near the roof, the other half being connected to the car and allowed to rest on the bottom of the conduit. The arrangement forms a continuous closed channel-way for the lantern, car and maneuvering cord, completely housing them from the weather, susceptible of operation at all seasons and at considerable distances. Conduits varying in length from 100 to 580 feet have been constructed at Manistee, Muskegon, Grand Haven, Kalamazoo, St. Joseph, Kenosha, Racine, Sheboygan and Kewaunee.

The cost of these structures was about $1.02 per linear foot, which included all the necessary work of getting the ballast stone of the cribs out to fasten the trestles and replacing the stone. Only one conduit, that at Kewaunee, has had the test of a winter's season, but they have all worked successfully and with comparative ease by hand power, excepting the one at Muskegon, the longest, which is operated by a small winch. The conduit can be added to at any time there is an extension made to the harbor piers, until such time as a limit (probably from 600 to 700 feet) is reached, when it may not be practicable to extend it on account of the amount of power necessary to propel the car. When this limit is reached, and an extension be necessary, it might in many cases be well, Maj. Adams says, to move the beacon light also.

THE LONE ATLANTIC TRAVELER.

In a letter to THE MARINE RECORD from Abo, Finland, Capt. Adolph Frietsch who crossed the Atlantic alone last summer in the small sail boat Nina, says that he has not quite decided which way to point her after leaving the Manchester Ship Canal, a place to which he is now about returning after a lecturing tour in the north of Europe. Capt. Frietsch says that he is very much disposed to make another passage in the Nina to the westward, but that in any case he will shortly return to the lakes providing that he is not summoned to "Davy Jones" locker in the meantime.

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THE large steel steamer Chili building at the yards of the Cleveland Ship Building Co., and the J. J. McWilliams, built at the yards of F. W. Wheeler & Co., West Bay City, as well as the Argo at the yards of the Detroit Dry Dock Co., are to be launched on Saturday next. Now, if we add a launch from the American Steel Barge Co.'s yard, at West Superior, and the two schooners launched this week from the yards of Capt. James Davidson, Bay City, there is a fairly good weekly record of lake shipbuilding.

IT is now well known that a new form of hull policy is being somewhat privately introduced among vessel owners. This is a most reprehensible feature in hull insurance on the lakes as we hold that there ought not to be a favored few or any class that would reap an advantage at the cost of their owners, as between assurer and assured. There was a uniformity and stability of business methods in vogue with the Inland Lloyd's which the foreign element this season bids fair, or foul, to shatter if possible, and we will take an early opportunity to show wherein the new form of policy differs from that which is being generally accepted. The full text of the new form of hull policy might perhaps enlighten a number of owners who like to believe that all ought to be treated fair and square in the matter of hull insurance throughout the season of navigation.

OWNERS of vessels are generally pleased with the act of the last Congress which abrogated the necessity of the owner giving bonds when taking out his steamer license and enrollment for the proper observance of the regulations attached thereto. Under the old law these bonds ranged as follows: Enrollment—vessels of 50 to 100 tons, $800 to $2,000, according to the size of the boat. License $100 to $1,000. The owner was put to the trouble of hunting sureties as well as recording an affidavit; now the simple declaration of the owner is all that is required. It cannot be recalled by any officials of the custom house that an owner was ever sued on his bond for violation of the rules. His boat was seized and that was the end of it until the courts had disposed of the matter, and this is what they will continue to do whenever necessary. The present Commissioner of Navigation has brought about the result.

A COMMUNICATION to THE RECORD from Buffalo calls attention to the recent grain shoveling contract, entered into by a committee of the Lake Carriers' Association, and suggests that if such men as S. D. Caldwell, Washington Bullard, E. T. Evans and other prominent vessel managers desired to go under the contract figures, they might easily do so, the agreement to the contrary notwithstanding. It is further the opinion of the writer that by next season grain will be handled at a much lower price than the $3.50 per thousand rate now agreed upon. Our correspondent writing under a nom-de-plume, and omitting to enclose his card, will excuse us from publishing his letter, however interesting the subject might prove in certain quarters. Latterly, everything has been coming down, from the price of building a ship to the provisioning of same when sailing, and we can see no reason why there should be anything but good words for those who have assisted in equalizing intermediate charges so as to meet the requirements of the times.

THE GATEWAY TO LAKE SUPERIOR.

For many years the United States has held possession of the gateway to Lake Superior, for such may be termed the lock at the St. Mary's Falls Canal, and quite as much so as Gibraltar is the key to the Mediteranean.

It appears that Canada, or rather the Imperial government could not rest quietly under this state of affairs, which in a sense debarred access to their territory on the north shore of Lake Superior. This feature was brought strongly to the front a quarter of a century ago when Canadian vessels with military supplies for Manitoba were refused permission to lock through the canal which was then under the jurisdiction of the state of Michigan.

It may be assumed that from the above episode sprung the idea to have a national waterway whereby Dominion tonnage could pass on to Lake Superior under all conditions and now this has been accomplished. Furthermore, it will be remembered that three seasons ago the Canadian government by an order in council, so changed the rules governing the imposition of tolls in the Welland Canal, their gateway to the coast, that a rebate to the tolls would only be allowed to vessels that discharged their cargoes at a Canadian port. While the new order appeared all right and just on the face of it, there was really a strong discrimination against the port of Ogdensburg, N. Y., and as a consequence against American tonnage consigned there, and this meant the building up of Kingston, Ont., as a terminal lake point at the expense of Ogdensburg. Remonstrance on the part of commercial and transportation interests with the Dominion government proved futile and finally a law was enacted by congress exacting toll from all Canadian vessels passing to or from Lake Superior, this state of affairs lasted only about five months when such pressure was brought to bear on the Dominion government that the order in council was abrogated relative to the Welland Canal tolls and at the same time the American "Soo" Canal was again thrown open to the use of Canadian vessels, free of all charges.

Canada is now independent regarding access to her Lake Superior ports. She has a splendid canal in her own territory and need not be under any further obligations to the United States for permission to reach her northern limits, in addition to this feature she holds the key to the coast via the St. Lawrence route, and with these facts in mind it has been a consideration for some time past to know whether the Welland Canal tolls would not be put in force again, seeing that the Dominion could no longer be checkmated by the United States in the same manner as formerly and it is of particular interest to note that Canada seems to have no inclination at this time to re-impose burdens on American commerce, for not only is the new canal at Sault Ste. Marie declared free of tolls for all tonnage, but the Welland and St. Lawrence Canals remain as formerly relative to toll charges. This is the more magnanimous on the part of Canada considering that she has spent vastly more money considering the meagre population of the country in improving natural and forming artificial waterways than has the United States, and the announcement that the Canadian St. Mary's Falls Canal is free to all vessels shows the spirit and feeling which the Dominion bears towards this country, for, of course, only American tonnage is meant when it is said that the canal is free to all.

Such concessions, or international courtesies, if so they may be called will no doubt go far towards smoothing over rough places which crop up from time to time in the usual order of events and questions involving international rulings are much easier settled in an amicable manner when a mutual feeling of friendliness predominates and such must be regarded the recent action of Canada in throwing open the new Sault Ste. Marie Canal.

SALVAGE SERVICES.

As we have faequently pointed out, it is not alone necessary to render towing services to vessels in distress, but unusual risk and circumstances, extraordinary skill in handling, and before all, rescuing an abandoned vessel from a position little frequented by other craft or where it is almost impossible to secure assistance, forms the basis of a clear salvage case.

The decision of Judge Seaman, U. S. Circuit Court, Mlwaukee, this week is a most equitable ruling and one which all engaged in lake traffic would do well to clearly understand. In his decision, Judge Seaman (and his judgement fits in fairly with his name,) calls attention to the difference between ocean and lake commerce, inasmuch as transportation over the lakes is vastly different from that of the open sea. Lake routes are clearly defined, generally traversed and regularly followed by all sorts of craft. In the event of a breakdown of machinery, overborne by weather, springing of leak, shifting of cargo, or even driving on a lee shore, there is always assistance of some kind at hand, in fact, vessels are seldom out of sight of the shore so that the proper signals would not unfrequently give the vessel in distress all the assistance needed and this too at a moderate outlay for the services rendered.

There is all the distinction possible between frequented and unfrequented routes, perils where there is no alternative save the one at hand to save life and property or where if one refuses, another is likely to come along and render the desired assistance, indeed, if the judicial rulings were otherwise. the day would be left open for fraudulent transactions and heavy salvage charges be agreed upon, where ordinary towing services only were rendered.

In the case to which we here allude, suit was brought in the sum of $15,000 for picking up on Lake Michigan and towing to a point of safety a disabled steamer, certainly it was late in the fall and but few vessels were navigating that portion of the lake at the time, so that taking all the conditions into consideration Judge Seaman concluded that extraordinary towing services and not as the plaintiffs sued for heavy salvage claims had to be considered. Instead of the former amount the Judge awarded the towing steamer $3,600, a sum which would liberally recompense her owners for detention and any extra labor or expense involved in the act of towing.

THE Dominion government has at last taken steps to have the Kaministiquia River dredged so that vessels may reach Port Arthur, on the north side of Lake Superior, without the continual grounding to which they have been subjected during the past few seasons. The channel is to be dredged to a clear 300 feet in width and to a full depth of 20 feet. With the opening of the Canadian "Soo" canal the Dominion may evince a greater interest in its lake marine and assist its upbuilding by deepening and improving some of the best ports on the north shore of the lakes.

THE opening rate of 40 cents per ton on iron ore from Escanaba to Lake Erie ports, with the deductions for trimming and discharging, can surely leave nothing for the vessel, and it is a question if it is worth changing ports, although one cent grain from Chicago to Buffalo is no inducement to charter there.

THE grain fleet has made a start out of Chicago, and navigation may be said to have fairly opened this week, except on Lake Superior. A week later and the indications are that St. Mary's River will also be navigable.

OBITUARY.

F. D. WHEELER.

Frederick D. Wheeler died Wednesday at his residence in West Bay City, Mich., from the effects of an abcess. Mr. Wheeler was superintendent of the Wheeler shipyard until September, 1893, when he was compelled to give up his position on account of failing health. From that time until his death he was a constant sufferer. He was 47 years of age and leaves a wife but no children. He was a brother of the Hon. Frank W. Wheeler.

THUNDER BAY ISLAND LIFE SAVERS.

The members of the Thunder Bay Island life-saving crew are as follows: Captain, J. D. Persons; surfmen, E. P. Motley, Eli Knudson, John Bryan, W. H. Durkee, George Winterhalter, Jule Frederickson, Edward Bishop and Martin Nelson.

HARRY STONE, of Marine City, Mich., says: "marine engineers must, in the very near future, become electrical engineers. The advantages of the dynamo over the steam engine for working capstans, windlasses, pumps and steering gears are many. The first cost of long steam pipes, their waste from condensation and their liability to accident renders them much less desirable than flexible wires for the transmission of motive force throughout the ship. The dynamo is always ready to start without the delay incident to starting a steam engine, and these advantages will bring it into general use on shipboard."

BOOKS AND PERIODICALS RECEIVED.

Notice to mariners for the Great Lakes, U. S. Hydrographic Office, Bureau of Navigation, Navy Department. Corrected up to April 15, 1895.

* * *

Surface currents of the lakes as deducted from drifts made by floating bottles during the past three seasons, the whole compiled into charts of the several lakes and published by the Weather Bureau, Department of Agriculture, Washington, D. C.

* * *

"Boiler Review," issued by the Hogan Boiler Co. Middletown, N. Y., will well repay the time spent in perusal to all who are interested in steam boilers. The April number reviews in a technical manner the theory and practice relating to the design, construction and operation of stationary, marine and locomotive boilers. The "Review" is a house organ, profusely illustrated and will be mailed free to steam users by the publishers upon request.

* * *

Morison Suspension Furnaces for marine and land boilers, is the title of a handsome volume forwarded us by The Continental Iron Works, (Greenport) Brooklyn, N. Y. The work; which may be regarded in the light of trade literature, treats of the Morison type of furnace, designed and patented by Donald B. Morison of Hartlepool, after a series of exhaustive experiments under the auspices of Mr. Samson Fox the promoter of the worlds renowned "Fox Corrugated Furnace." The Morison suspension furnace is credited with having all the valuable features of the Fox patents and in a more perfect development so that it has been accepted and classed by the several ship surveying societies and the U. S. Board of Supervising Inspectors of steam vessels. The Fox Corrugated or the Morison Suspension, can be produced at the same cost, but the sole right to manufacture in the United States and Canada is vested with the Continental Iron Works, Brooklyn, N. Y.

* * *

The annual report of the Light-House Board for the fiscal year ended June 30, 1894 has just been received. This annual is rendered more valuable than the former issues from the fact that it contains upwards of one-hundred pages treating of experiments and investigations relating to fog signals in the United States. The report on fog signal experiments is also enhanced by a number of finely executed engravings showing most clearly the result of the findings throughout the research into this interesting subject. The U. S. Light-House Department is one of the most valuable branches of the national service and is as it should be, of unestimable benefit to the country's commerce, nor is the department as at present constituted, one whit behind the action of the most scientific bodies of other maritime countries in its endeavour to elucidate subjects of which perhaps we have hitherto not been as well versed in as modern scientists might desire and the principles of sound lays perhaps in this direction. The report of the Light-House Board tells us all that is known at present regarding aberrations in the audibility of sound and the study is being continued.

MILWAUKEE INDUSTRIES.

The Sheriffs Manufacturing Co. are putting a new shaft and wheel on the steamer Wetmore, furnishing a new shaft for the steamer Thomas Davidson and lining up her shafting and stern-pipe. They shipped a new wheel to Manitowoc for the steamer E. A. Shores on Wednesday. They overhauled and bushed the high pressure cylinder on the steamer Neosho; they had the shaft and stern-pipe out of the steamer Pabst, and relined pipe; have built a pair of engines 14 by 16 for the Green Bay Dredging Co., put a new 11-foot wheel on the steamer Nyack, which has increased her speed 40 minutes in the run from Milwaukee to Muskegon.

The Milwaukee Dry Dock Co. have the steamer Codorus in dock for overhauling and painting, the steamer Wetmore, which went ashore off Cleveland last fall is in their west side dock having damages repaired; also the barge Brunette, her consort; the steamer George Durnham is in for general repairs, calking and ironing; the steamer William Rudolph for a new wheel and a general overhaulng, the steamer Geo. Dyer had her spars changed into pole spars; also the steamer R. P. Flower.

APPOINTMENT OF OFFICERS FOR 1895.

LEHIGH VALLEY TRANSPORTATION CO., BUFFALO.

	MASTER.	ENGINEER.
Str. E. P. Wilbur	J. Brown	M. K. Clark
" Cayuga	G. Graser	A. J. Jones
" Seneca	D. Driscoll	E. Hull
" Saranac	J. M. Todd	J. Lahey
" Tuscarora	Wm. Williams	H. Wadleigh
" Tacoma	A. J. Talbot	G. Hale
" Oceanica	James Todd	C. Plodeck
" Clyde	G. McMinn	R. Fleming
" H. E. Packer	M. Holland	T. Myre
" F. Mercur	T. Rahill	D. Sullivan
" R. A. Packer	C. E. Fuller	Wm. Tehan

ANCHOR LINE, BUFFALO.

Str. India	P. O Neil	D. Donahue
" China	C. Christy	John Wise
" Japan	H. Cronkhite	W. Wilson
" Gordon Campbell	C. Nelson	W. Milligan
" Alaska	G. Delaney	G. W. Town
" Wissahickon	J. McCarthy	F. Rehbaum
" Delaware	A. McKenzie	A. Birdsell
" Juniata	D. Ryder	J. Forrester
" Conestoga	H. O. Miller	W. Daltin
" Lycoming	L. Wright	J. H. Smith
" Conemaugh	F. Bloom	W. A. Black
" Lehigh	J. H. Berow	T. Griffin
" Clarion	J. Corcoran	J. Erskine
" Susquehanna	M. Riley	Wm. Nolan
" Codorus	M. Rowan	W. J. Swain
" Schuylkill	J. Doherty	J. E. Jordan
" Mahoning	H. Durker	C. J. Fox

JOHN RICE, BUFFALO.

Str. Robert Mills	Robert Drury	T. F. Batrick

BEATTY LINE, SARNIA, ONT.

Str. Monarch	Ed. Robertson	Ed. McKeen
" United Empire	John McNoble	C. Scott

H. H. CLOUGH, ELYRIA.

Str. Parks Foster	Geo. E. Merritt	P, Marcoux
" Ira H. Owen	J. Q Owen	A. W. Wilcox

C. E. BENHAM, CLEVELAND.

Str. Britannic	W. P. Benham	J. F. Walsh
" Quito	J. D. Mullen	J. C. Johnson
" Nahant	E. Detless	—. Norman
" H. B. Tuttle	T. Delarkie	—. Green
Tug C. E. Benham	J. H. McLeod	
Schr. H. C. Richards	John Vincent	
" Queen City	C. E. Benham	

O. W. BLODGETT, BAY CITY, MICH.

Str. C. H. Bradley	James Bennett	Adam Haig
Sch. Mary Woolsey	Wallace Allan	
" Brightie	F. H. Lennon	
" Galatea	John Hudson	
" Goshawk	M. Nagle	
" B. W. Jenness	Thomas Turner	

COLLINGWOOD, ONT.

Special Correspondence to The Marine Record.

The ice in the harbor is becoming honey-combed.

The C. P. R. steamer Manitoba is being fitted out for the Windsor and Port Arthur route.

Capt. Robt. Smith of the dredge Challenge has commenced to fit out for the summer's work.

Mr. D. McQuade is in Owen Sound looking after the engineers department of the new Black Liner City of Toronto.

Mr. Robert Brown will be first officer on the steamer Carmona, and Capt. Charles Hill will have a similar position on the Cambria.

Messrs. D. McLeod and T. Noble have gone to the "Soo" to fit out the tugs of Messrs. J. & C. Noble, which were recently returned by the government.

Capt. H. Cleland has purchased the tug James Storey from Mr. Richard Glackin, of Algoma Mills. This tug was built here a few years ago by the late James Storey and is one of the strongest boats on the bay. Capt. Cleland intends to engage in the towing business. The boat is at present lying at Algoma Mills.

The Bryan Mfg. Co. have just completed work on the cabin of the pleasure yacht Adrelaxa. A large water tube boiler supplies steam for the engine, which is expected to drive the little craft at the rate of 14 miles an hour. The yacht will be taken to Waubaushene as soon after the opening of navigation as the weather will permit.

Mr. J. McLellan, who has been appointed purser of the steamer Northern Belle, arrived in town Saturday. Mr. McLellan has just returned from the Pacific coast. Just prior to his departure for the east, Mr. McLellan made a trip from Everett to San Francisco on Capt. Alex McDougald's Pacific whaleback City of Everett. Capt. Robt. Smith, of the steamer Christopher Columbus, was on board during the trip. While on the coast Mr. McLellan was general agent for the Pacific Navigation Co.

Capt. Dunn, of the D. S. S. Petrel, has everything in the way of cleaning, painting and refitting well under way. Capt. Dunn received the other day from the British Government stores at Halifax, a brass, or what is officially called a bronze cannon, of the time of George IV. It is dated 1813, and contains forward of the breech a deeply engraved G. R., surrounded by the Garter motto "Honi soit qui maly pense" and surmounted by the crown. Messrs. Kennedy & Sons are making an iron carriage on which the gun will be mounted at the stern.

Fifteen years ago, Saturday, March 30, Mr. W. Ireland, in company with Messrs. Arthur Starkey, A. E. Sheldon, W. A. Elias, Frank Dowell, Jr., and an Indian named Podonquot, discovered the hull of the wrecked steamer Waubuno lying bottom up in a small bay between three islands some eight or ten miles distant from the point where the vessel was supposed to have been lost on Nov. 22, 1879. The party made the trip with a team of ponies on the ice, and although there was very heavy ice that year, navigation opened on April 19. From present appearances this year it may be the last of April or beginning of May before navigation opens.

ASHTABULA HARBOR, O.,

Special Correspondence to The Marine Record.

About 200 car loads of ore per day are going out over the P. Y. & A. Railroad.

The Minnesota steamer Mariposa has been receiving her new towing gear. She will load coal under the McMyler machine on Saturday..

The tug John Gordon has been having her boiler repaired. Efforts have been made of late by Toledo parties to purchase her, but she is not for sale.

The schooner Donaldson, which wintered at the Lake Augelins dock, was discovered a few days ago to have been burglarized during the winter and looted of everything valuable.

Capt. F. E. Walworth opened the life-saving service here Tuesday with the following crew: George Wilson, Albert Ocha, Charles Anderson, Frank Ingler, George Brown, Irwin Himan, and Gilbert Robbins. The crew is the same as last season's except that Brown succeeds Henry Fyron, who was transferred to the Buffalo crew.

FLOTSAM, JETSAM AND LAGAN.

Saginaw Bay will not be clear of ice for several days yet.

The D. & C. steamers will land at Quayle's dock in Toledo.

The barge Nelson Bloom is getting a new main mast at Marine City.

There was more lumber shipped out of Bay City by rail last year than by water.

The American lock at the Sault is ready for business, but there is plenty of ice in the lake yet.

Gen. Casey, chief of engineers, U. S. A., will be placed on the retired list May 10, by limitation of age.

Capt. Alex Clifford, formerly of the barge Brooklyn, has taken charge of the barge H. C. Sprague, now lying at Toledo.

The United States Weather Bureau will connect the Manitous with the main land by telephone for the benefit of mariners.

Heavy northeast winds in Green Bay during the latter part of last week piled the ice 30 feet high on the docks at Menominee, causing much damage.

The schooner O. J. Hale has received some repairs and a new windlass at Port Huron. Capt. C. W. Aimis, who owns a quarter interest, will command her.

The little steamer J. D. Marshall, of Chicago, has the distinction of being the first boat through the Straits of Mackinac this season. She passed down April 11, at 6 o'clock p. m.

The channel at Ahnapee, Wis., is to be deepened and extended up stream several hundred feet, and the old drawbridge will be taken down and a new one constructed farther up. The excavation will be nearly all rock blasting, as the head of the river is underlaid with heavy ledges of limestone.

The schooner Geo. L. Wrenn is now ready for buisness. The cabin has been greatly reduced in size and the fittings prepared for the cruise around the world have all been removed. The craft is owned by Capt. Shomer and E. D. Weimer and she will be kept busy at work this season earning dividends for the owners instead of gallivantering around on a Don Quixote cruise.

LAUNCH OF THE CAPE ANN.

There was another launch at Kensington on Saturday; it had no connection with the Navy, or with Transatlantic Liners, but was of importance to a big American city. The new steamship which is being built for the Boston & Gloucester Steamboat Co., by the Neafie & Levy Co., glided into the Delaware on Saturday last week about 11 A. M. with champagne frothing at her bow quite in the regulation way.

The vessel is to ply between Boston and Gloucester, Mass., and had been ordered with the unusual provision that the building company shall furnish a ship completed in every particular, down to the smallest details of the galley outfit, and the glass ware, china, and table linen.

The steamship folk from Boston, including all the officers of the company, arrived in the city in the morning and proceeded at once to the yard in Kensington. The hull of the new vessel was propped up on the ways, and all the details of ceremonial launch was studiously observed. When the cross pieces had been cut through and the boat began to rush towards the water, Miss Agnes S. Merchant, daughter of Edward S. Merchant, treasurer of the steamship company, cracked the traditional bottle and exclaimed with due solemnity: I christen thee "Cape Ann." Whereupon the "Cape Ann" ran away from her in a very ungallant fashion and plunged into the water with such haste that it seemed a total abstainer eager to free its nose from the wicked smell of wine.

The "Cape Ann" has a guaranteed speed of 16 knots, certified to carry 1000 passengers. Her dimensions are 185 feet long, 28 feet beam, and 13 feet deep. Her hull is built of steel through out and will be completely fitted up with everything necessary to make her a first class passenger and freight steamship.

She has five water-tight bulkheads, and steel casings around the fire-room, engine room, and smoke stack from main to saloon deck, so that all danger from fire around the engine room is well guarded against. She will be propelled by a vertical inverted compound engine 25 and 50" by 30" stroke, running at 160 revolutions per minute, indicating 1500 horse power. All pumps are independent. There is a large and complete electric light plant, both for lighting the ship and supplying current for a 6000 candle power search light. She will also be furnished with steam stearing gear, and three steam hoisting engines for cargo. The steam for this machinery will be supplied by three extra large boilers, each having two corrugated furnaces and ample heating surface, for use with forced draught, the pressure of steam being 125 pounds. These boilers are built of steel in excess of the United States requirement for passenger steamers. The fire room will be air-tight and worked under pressure, air being supplied by a special steam fan, delivering 25,000 cubic feet of air per minute. Every modern appliance has been furnished to make this machinery as complete as possible.

With regard to the interior finishing of the hull, she will be panneled in white and gold, the upholstery being in harmony with the wood work.

SHIPCHANDLERY.

Among the shipchandlery establishments of the Great Lakes none are better known than that of Howard H. Baker & Co., 18 to 26 Terrace, Buffalo. The business was established some 50 years ago and Mr. Howard H. Baker has been connected with it for over 40 years. They have studied and watched the shipchandlery trade thoroughly, have always made it a point to handle the best material and make the prices right. As a result the firm has a reputation along the lakes which is indeed enviable. Those trading with Howard H. Baker & Co., know that with them honesty is a fundamental business principle, and that it matters not whether the order is an extensive one for rope, anchors, paints, chains, canvas, marine hardware engine or paints, oils or even on down to a pound of nails the same principle is in practice, and strict business integrity rules all transactions.

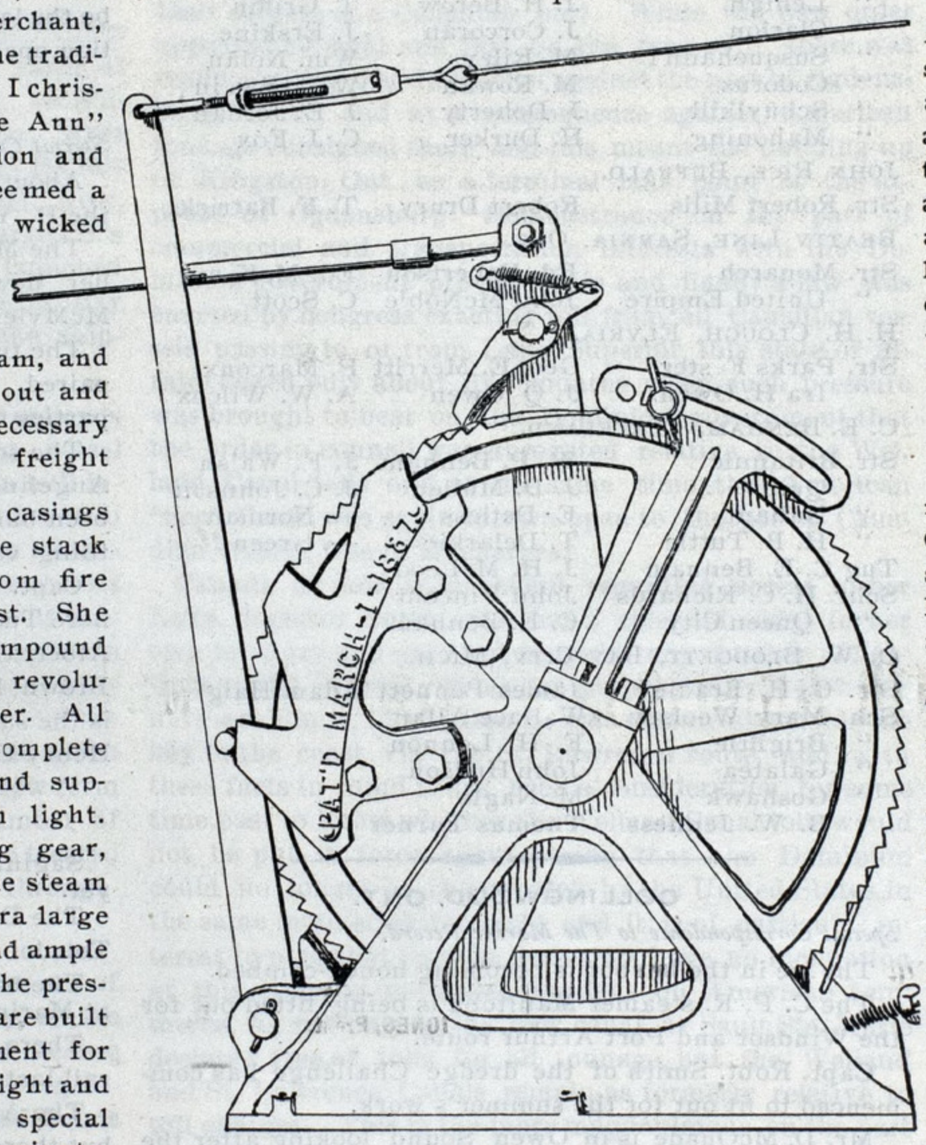
It is well for vesselmen to bear the foregoing in mind at this season of the year when large sums of money are being expended for outfits and when every man wants to get the most possible for his money. Of course the best materials are always used on shipboard and at the Buffalo house masters can be sure of ob taining what they require with honest weights and measure, fair prices, and what is also of great value to the vessel owner and captain when in port, prompt delivery of all orders entrusted to their hands, as their ferry yacht "Despatch" is kept constantly in service throughout the season to attend on vessels ordering outfit and equipment supplies.

AN AUTOMATIC FOG WHISTLE.

(ILLUSTRATED)

The new "rules of the road" in Rule 14-(a), Says: "Steam vessels under way, excepting only a steam vessel with raft in tow, shall sound at intervals of not more than one minute three distinct blasts of her whistle."

Hitherto it has been customary in quite a large number of steamers to allow the blasts to be blown by hand, that is to say, the officer of the watch or a spare hand kept the steam whistle blowing in fog as near to the regulation time as his judgment would permit, although, if his attention had been drawn away for the time being it is not to be expected that the regularity of blasts would occur in due sequence.



THE CHASE AUTOMATIC FOG WHISTLE MACHINE.

The Chase Automatic Fog Whistle Machine manufactured by the Chase Machine Co., Cleveland, is automatic in its movements and nearly 200 lake steamers have it now in use, but, with the adoption of the new rules the automatic fog whistle has been improved to meet the latest requirements.

In favor of the use of this simple machine for steamers rests the fact of its general adoption on the lakes, and, furthermore by its endorsement by the board of Supervising Inspectors of Steam Vessels as a means of insuring greater safety to life and property, with this end in view the inventor and manufacturers of the Chase Automatic Fog Whistle intend to more widely, introduce their excellent appliance and instead of confining their business as heretofore exclusively on the lakes, they will now enter the coast and ocean trade as competitors in labor saving appliances, and as a positive agency in meeting the exact legal requirements of signaling by steam whistle in fog.

SUBMARINE CABLES.

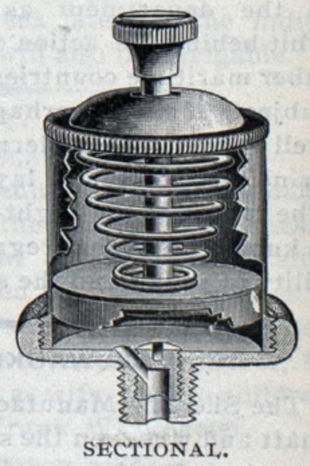
The value of the Commercial Cables Co.'s plant is officially stated to have been increased to $12,250,000 by the addition of a new main Atlantic cable and its complete equipment, the acquisition of wharf property at Halifax, Nova Scotia, for the accommodation of the company's repairing steamer, the extension of the Canso and New York cable and other improvements which have been carried out, at a cost of $2,500,000. In January, 1894, the balance of certain debenture bonds outstanding, amounting to $400,000 was redeemed, and the company has now no fixed charges. The business of the company was adversely affected last year by the great commercial depression prevailing both in America and Europe. The new main Atlantic cable of extra heavy construction successfully laid between Canso, Nova Scotia, and Waterville, Ireland, possesses a high carrying capacity, and the rate of speed guaranteed by the contractors has been exceeded. The laying of the Canso and New York cable from the landing place at Coney Island through the harbor of New York to Pier A, North River, a distance of 14 miles, greatly increases the security of the company's communication between New York and Europe. The rough receipts of the company in 1894 were $1,773,434, as compared with $1,842,347 in 1893. The working expenses in 1894 were $762,996, as compared with $784,600 in 1893. The net revenue for 1894 was accordingly $1,010,438, as compared with $1,057,747 in 1893. The amount distributed in dividends in each year was $700,000.

THE steam towing machine manufactured by the American Ship Windless Co., brings a new factor of safety into the business. All the old styles of towing are simply old methods newly brought to the front, after having been tried and abandoned years ago, but the patent machine mentioned above has an automatic arrangement which is almost human in its accuracy and adaptability to the purpose of towing. There is no limit to its elasticity, like the old methods, and consequently it never comes to a solid pull or strain, as all the old methods do. This machine therefore embodies safety, economy and efficency.

THE LUNKENHEIMER 'JEWEL" GREASE CUP.

The engravings below represent the latest achievement in the grease cup line made by The Lunkenheimer Co., of Cincinnati, Ohio, with branch offices at 51 John street, New York, and 35 Great Dover street, London. It has been designed to meet the demand for a simple and inexpensive automatic grease cup and to take the place of iron cups being stronger and lighter in weight. The "Jewel" is admirably adapted for shafting, loose pulleys, friction clutches and many other places. The base is of cast brass, while the top is of tubing and spun brass. It is of brass throughout, has a leather packed plunger and is provided with a feed regulating screw in the base of cup which will admit of perfect regulation of feed. The makers claim this cup to be far superior to iron cups and is offered at prices that defy competition.

EXTERIOR VIEW WITH PLUNGER DRAWN TO TOP OF CUP.



SECTIONAL.

CUP EMPTY WITH PLUNGER AT BOTTOM.

The working of cup is as follows: When empty and plunger is at bottom of cup, unscrew and take off the reservoir; then lift the plunger to top of same and secure it in this position by means of the lock arrangement, then fill the reservoir with grease, screw it back into its base, release the spring lock so as to put the pressure on grease and the cup again feeds automatically until empty. The feed regulating screw in base of cup permits adjustment of the opening through the shank of cup to suit any kind of grease.

This cup is claimed to be the simplest, most efficient and lowest priced automatic grease cup on the market. This company, besides making the above, offers several other styles of grease cups for various purposes, as follows; the "Ideal," "Marine," "Tiger" and "Ohio" grease cups. Full particulars can be had by addressing the company. Catalogues, circulars, etc., upon request.

WILLIAM L. BROWN, President.

WALTER F. COBB, Vice President and Treasurer.

W. I. BABCOCK, Manager.
O. R. SINCLAIR, Secretary and Asst. Treas.

Chicago Ship Building Company,

STEEL SHIPBUILDERS and DRY DOCK PROPRIETORS,

DRY DOCK AND YARDS:
101st Street and Calumet River.

LONG DISTANCE TELEPHONES:
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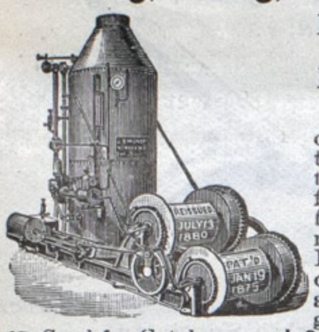
CHICAGO OFFICE, 1013 ROOKERY, "MAIN 3447."

Station S, CHICAGO, ILL.

Hoisting, Mining, Bridge Erecting,



Dock Build'g, Pile Driving, Coal Hoisting and Quarry Engines

of any power, sugar cane transferring engines, transferring machines for depositing cane from car to carrier, with my improved Patent Friction Drums, with or without Boilers. Any amount of reference given. Established 1870.

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741 Market St., Philadelphia, Pa.
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249 South Jefferson St., Chicago, Ill.
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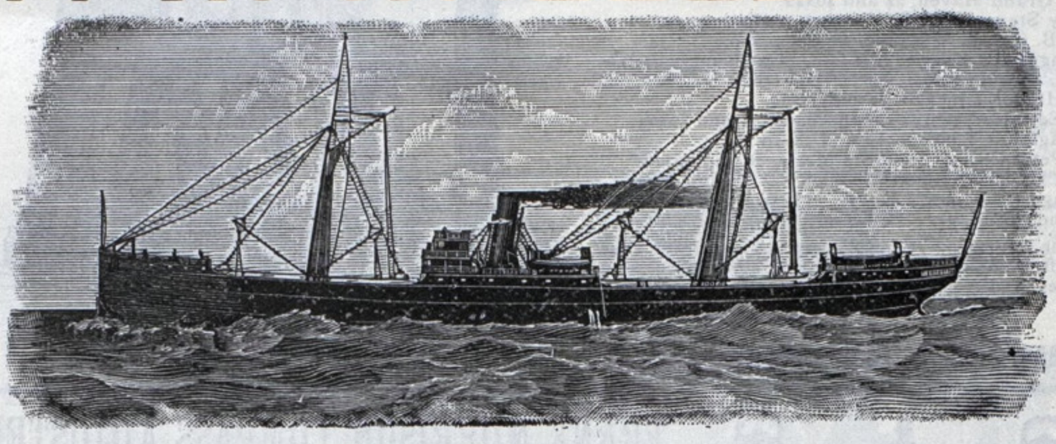
34 Fremont St., San Francisco, Cal.
85 Front St., Portland, Oregon.
Fourth & Wakouta Sts., St. Paul, Minn.
218 Congress St., Boston, Mass.

F. W. WHEELER & COMPANY.,



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IRON, STEEL AND WOODEN SHIPS,

FOR LAKE OR OCEAN SERVICE.

West Bay City, Mich.

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C. W. STIVER, Secretary & Treasurer.

FRONTIER IRON WORKS,

MARINE ENGINES,

DETROIT, MICH.

INCORPORATED 1794.

Insurance Company of North America.

CAPITAL, Paid up in Cash, - - $3,000,000.00
ASSETS, - - - - - - 9,562,599.92

CHARLES PLATT, President. WILLIAM A. PLATT, Vice-President.
EUGENE L. ELLISON, 2nd Vice-President. GREVILLE E. FRYER, Sec'y & Treas.
JOHN H. ATWOOD, Assistant Secretary.

Lake Marine Department.

GEORGE L. McCURDY, Manager,
CHICAGO, ILLS.

MARINE AND INLAND INSURANCE.

ATLANTIC MUTUAL INSURANCE COMPANY,

(ORGANIZED 1842.) Office, 51 Wall Street, NEW YORK.

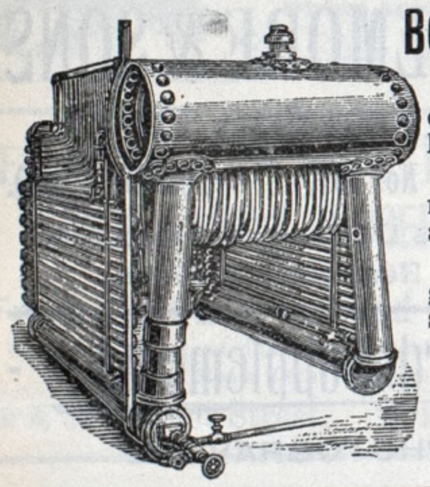
Insures against Marine and Inland Transportation Risks and issue Policies making Loss Payable in England.

Assets over $10,000,000 for the Security of its Policies.

The profits of the Company revert to the assured, and are divided annually upon the premiums terminated during the year; thereby reducing the cost of insurance. For such dividends, certificates are issued bearing interest until ordered to be redeemed, in accordance with the charter.

J. D. JONES, Prest. W. H. H. MOORE, Vice-Prest. A. A. RAVEN, 2nd Vice-Prest. J. H. CHAPMAN, Secy.

Boyer's Patent Sectional Water Tube Boilers



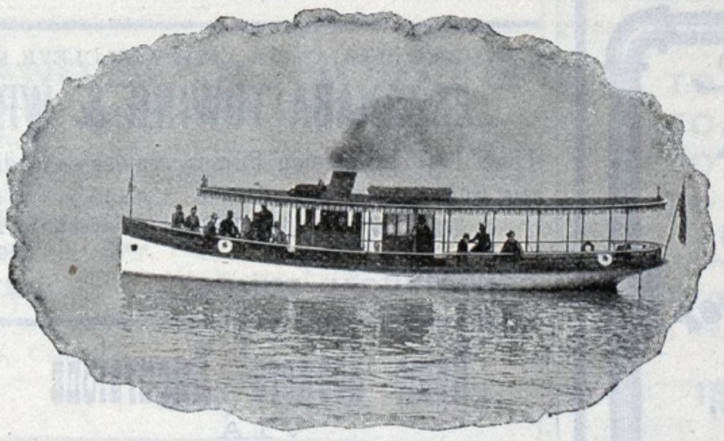
These rapid Steaming Boilers require less room, occupy less space in width, height and length; weigh less than any other.

Have short, perfect circulation, no dead ends, no joints in the fire, and any engineer can get at all parts of it.

The Steam Yacht "Rex," having 25 square feet grate surface and 1000 square feet heating surface, steamed 144 miles on 1000 lbs. of coal.

Address:

L. BOYER'S SONS,
90 Wall St., New York City.



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Clybourn & Southport Aves.,

CHICAGO.

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MARINE ENGINES,
MARINE BOILERS.

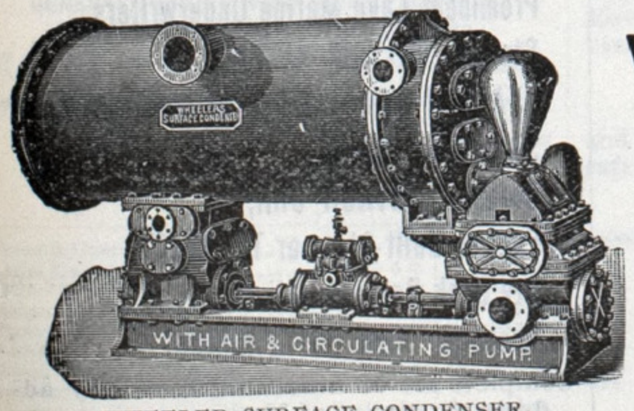
Write for List of Boats for Sale.

Wheeler Condenser & Engineering Co.,

39 & 41 CORTLANDT STREET, NEW YORK.

WHEELER'S IMPROVED SURFACE CONDENSERS

Mounted upon Combined Air and Circulating Pumps.



WHEELER SURFACE CONDENSER,
Mounted on Combined Air and Circulating Pumps.

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WHEELER ADMIRALTY SURFACE CONDENSER.
WHEELER LIGHT HALL SURFACE CONDENSER.
VOLZ PATENT COMBINED SURFACE CONDENSER AND FEED-WATER HEATER.
WHEELER FEED-WATER HEATER, AIR AND CIRCULATING PUMPS.
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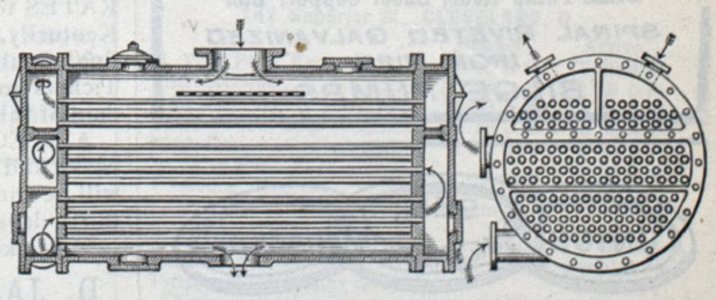

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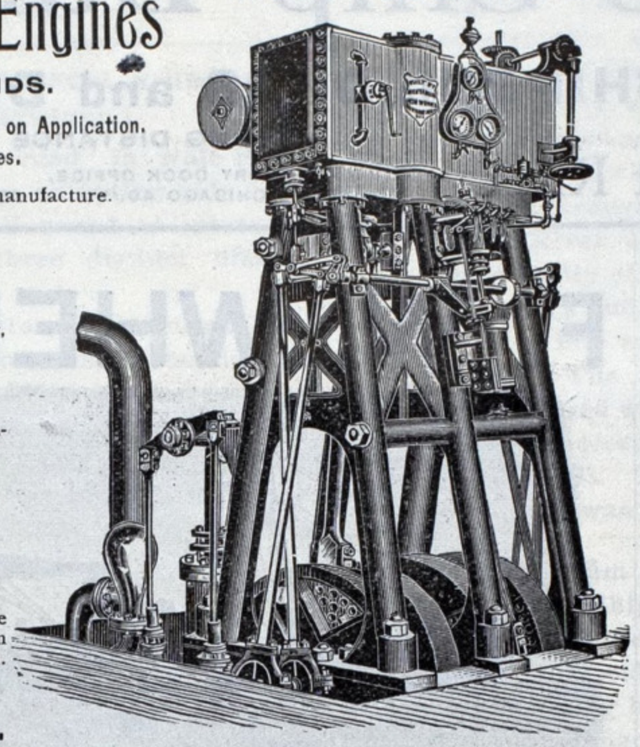

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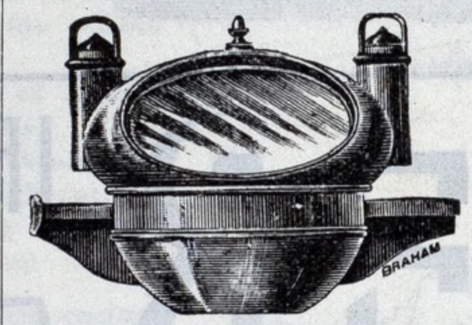

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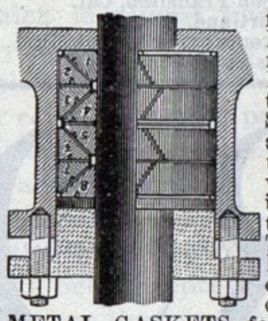

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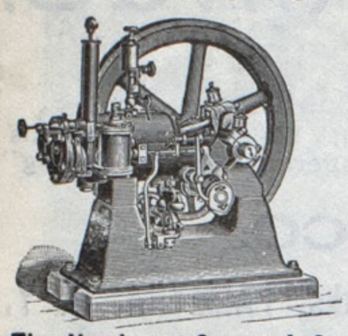

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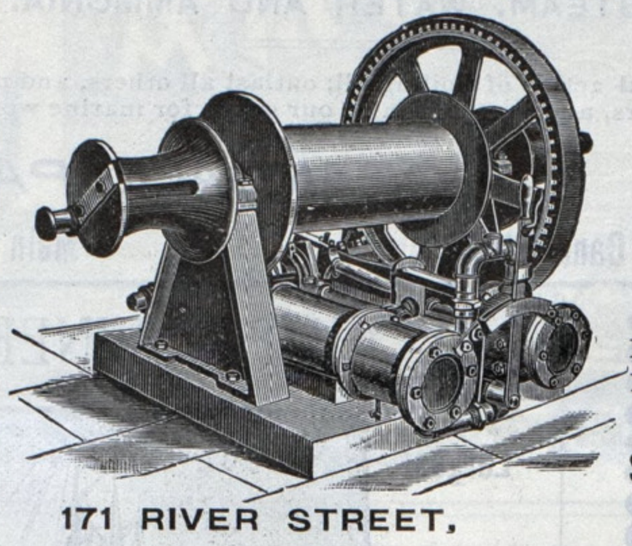

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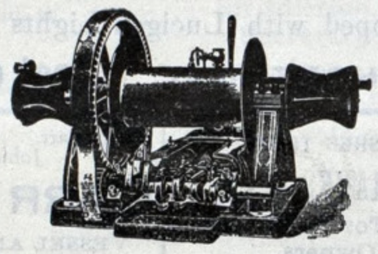

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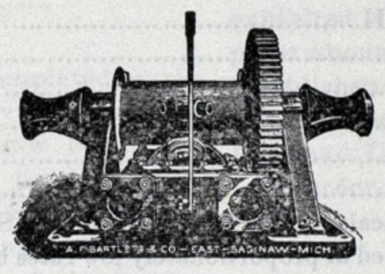

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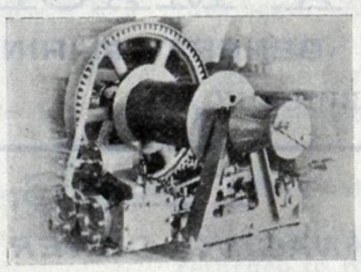

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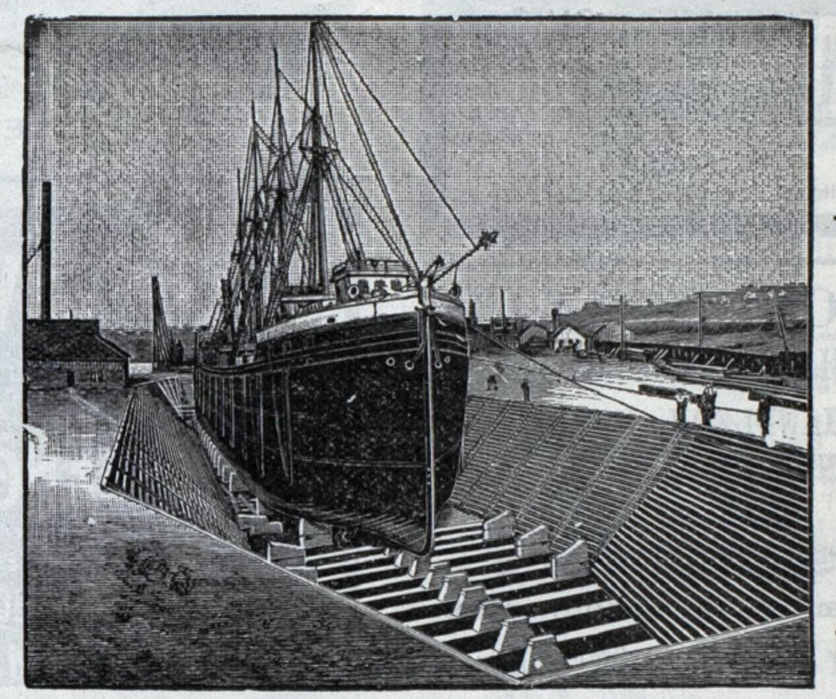

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